

REMARKS

With the above amendments, claims 34, 35, 37, 40, 42, 45, 46, 49 and 52-56 have been amended and claim 59 has been added. Claims 28-37, 40, 42-58 are pending with claims 28-33, 42-44, 50, 51, 53, and 54 having been withdrawn from a prior restriction requirement. Thus, claims 34-47, 40, 45-49, 52, and 55-59 are ready for further action on the merits. Applicants respectfully request that the Examiner rejoin the method claims upon finding allowable subject matter of the product claims in accordance with the holding of *In re Ochiai*, 37 USPQ2d 1127 (Fed. Cir. 1995). No new matter has been added by way of the above amendments. New claim 59 is the same as claim 34 except that the language has been modified slightly to make it clearer. Reconsideration is respectfully requested in light of the following remarks.

Rejections under 35 USC §112, second paragraph

Claims 34-37, 40, 45-49 and 52-58 are rejected under 35 USC §112, second paragraph as being indefinite. The Examiner has maintained the rejection over the term "prodrug". Applicants have canceled all appearances of the term "prodrug" from the claims. Thus, the rejection is moot. Withdrawal of the rejection is warranted and respectfully requested.

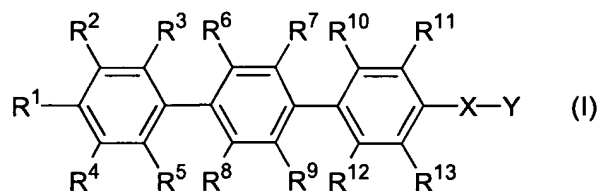
Rejections under 35 USC §103

Claims 34-36, 45-49, and 57-58 are rejected under 35 USC §103(a) as being unpatentable over Coates '397 (WO 93/22397).

This rejection is traversed for the following reasons.

Present Invention

The present invention, as recited in claim 34, relates to a compound of the formula (I):



wherein R¹, R², R³, R⁴, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰, R¹¹, R¹² and R¹³ are each independently hydrogen, hydroxy, halogen, carboxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted lower alkenyloxy, optionally substituted lower alkylthio, optionally substituted lower alkoxy carbonyl, optionally substituted acyloxy, optionally substituted lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted lower alkylsulfinyl, nitro, cyano, formyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted sulfamoyl or optionally substituted heterocyclyl,

X is -O-, -CH₂-, -NR¹⁴- wherein R¹⁴ is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl or acetyl, or -S(O)_p- wherein p is an integer of 0 to 2,

Y is optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted acyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted aryl or optionally substituted heterocyclyl, and Y may optionally be substituted lower alkoxy when X is -CH₂- and may optionally be substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or -NR¹⁴-,

R¹ and R⁴, R¹ and R², R² and R³, R⁴ and R⁵, R⁶ and R⁷, R⁸ and R⁹, R¹⁰ and R¹¹, R¹² and R¹³, R¹¹ and -X-Y, or R¹³ and -X-Y taken together may form a 5- or 6-membered ring which may contain one or more of O, S or NR¹⁵ wherein R¹⁵ is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted arylsulfonyl and which may optionally be substituted,

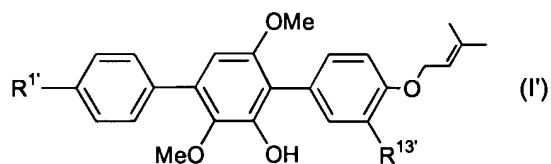
excluding compounds wherein one or more of R⁶, R⁷, R⁸ and R⁹ are halogen and the others are hydrogen, compounds wherein all of R⁶, R⁷, R⁸ and R⁹ are halogen and compounds wherein all of R²-

R^{13} are each independently selected from the group consisting of hydrogen, halogen and cyano,

provided that R^1 is not hydrogen, fluorine, optionally substituted lower alkyl or optionally substituted lower alkoxy, all of R^2 , R^3 , R^4 , R^5 and R^{12} are hydrogen, or R^{13} is not hydrogen or halogen when R^6 , R^7 , R^8 and R^9 are all simultaneously hydrogen,

and further provided that R^1 is not methyl or acetyloxy, R^{13} is not hydrogen, optionally substituted lower alkoxycarbonyl or optionally substituted carbamoyl, or -X-Y is not methoxy when at least one of R^6 , R^7 , R^8 and R^9 is a substituent other than hydrogen,

and excluding a compound of the formula (I'):



wherein $R^{1'}$ is hydrogen or hydroxy and $R^{13'}$ is hydroxy or methoxy; or a pharmaceutically acceptable salt or hydrate thereof.

Disclosure of Coates '397

Coates '397 discloses an electrooptical system in which a PDLC film is positioned between 2 electrode layers. The PDLC film contains a liquid crystal mixture forming microdroplets in an optically isotropic, transparent polymer matrix. The liquid crystal mixture comprises one or more compounds of the formula shown in the abstract wherein R, A1, A2, Z1, Z2, X1, X2, Q, Y and n are as defined therein as well as one or more reactive liquid crystalline compounds. The PDLC film is said to exhibit improved switching times, especially at low temperatures.

Removal of the Rejection over Coates '397

Applicants assert that the Examiner has failed to make out a *prima facie* case of obviousness with regard to the 35 USC §103(a) rejection over Coates '397. Three criteria must be met to make out a *prima facie* case of obviousness.

- 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
- 2) There must be a reasonable expectation of success.
- 3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

See MPEP §2142 and *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicants submit that the Examiner has failed to satisfy any of the above elements.

First, there is no overlap between the compounds disclosed in Coates '397 and the instantly claimed invention. Claim 34 has been amended to exclude "compounds . . . wherein all of R²-R¹³ are each independently selected from the group consisting of hydrogen, halogen and cyano". Thus, there is no overlap between the instant invention and Coates '397. There is neither suggestion nor motivation in Coates '397 to modify the Coates '397 reference to arrive at the compounds of the instant invention.

Moreover, Applicants submit that the genus in Coates '397 is so large that one of ordinary skill in the art would never modify the compounds present in Coates '397 to arrive at the compounds claimed in the instant invention. Coates '397 has no disclosure or suggestion for modifying their compounds that would allow one to arrive at the instant invention.

Second, because there is no overlap between the genus disclosed in Coates '397 and the instant invention, one of ordinary skill in the art would not expect to successfully make compounds that have not even been disclosed.

Third, Applicants point out that because there is no overlap between the genus disclosed in Coates '397 and the

instantly claimed invention, the elements of the instant invention simply are not met by the disclosure of Coates '397.

For this reason alone, Applicants submit that the rejection over Coates '397 is inapposite. Withdrawal of the rejection is warranted and respectfully requested.

Even if a *prima facie* case of obviousness had been made by the disclosure in Coates '397, which Applicants do not concede, Applicants submit that the instant invention discloses unexpectedly superior properties over the compounds disclosed in Coates '397. Attached to this response, please find a 37 CFR §1.132 declaration. In this declaration, the Examiner's attention is drawn to page 3 of the declaration wherein a comparison was made between compounds having only a halogen group on the benzene ring, for example, compounds I-a, I-c, and I-d, and the compounds having an alkyl group, an alkoxycarbonyl group, and/or an alkoxy group instead of or in addition to a halogen group, i.e., I-b, I-e, I-f, I-g, and I-h. Please see the attached drawing with these compounds indicated. The Examiner's attention is drawn to the IgE suppressive activities of the compounds having substituents other than halogen and note that they are higher than those of the original compounds.

In other words, one of ordinary skill in the art would readily recognize that this data proves that the modification (i.e., the substitution or addition of alkyl, alkoxy, or

alkoxycarbonyl) induces a remarkable and unexpected improvement of IgE production suppressive activity. The effect of this remarkable and unexpected improvement is neither disclosed nor remotely suggested by Coates '397. As a matter of fact, the invention of Coates '397 are directed to compounds that are to be used in an electrooptical system in which a PDLC film is positioned between 2 electrode layers. A more diverse use of the compounds would be hard to fathom.

Thus, Applicants submit that the rejection over Coates '397 is inapposite. Withdrawal of the rejection is warranted and respectfully requested.


With the above remarks and amendments, it is believed that the claims, as they now stand, define patentable subject matter such that passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

If any questions remain regarding the above matters, please contact Applicant's representative, T. Benjamin Schroeder (Reg. No. 50,990), in the Washington metropolitan area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Declaration under 37 C.F.R. § 1.132